

REMARKS

Claims 1 – 12 are pending in the application. Applicants amend claims 1, 8, and 10. No new matter is added. Support may be found, for example, at page 10, lines 14 – 19 and page 27, lines 20 – 30 of Applicants' specification.

REJECTION UNDER 35. U.S.C. §§ 102, 103

Claims 1 and 2 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,608,662 to Large et al. Claims 8 - 10 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,732,233 to Klim et al. Claims 3 - 7 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Large in view of U.S. Patent No. 6,519,225 to Angle et al. Claims 11 and 12 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Large in view of U.S. Patent No. 6,081,538 to Donley. Applicants amend claims 1, 8 and 10 to clarify the nature of their invention, and respectfully traverse this rejection.

In independent claim 1, Applicants disclose a packet data processing apparatus for processing a packet received from a network by a processor. The apparatus includes a packet data access part, which has a plurality of registers arranged in series, shifting the received packet through the plurality of registers toward an outlet in synchronization with a clock. The processor processes the received packet while the it is being shifted through the plurality of registers, independently of an instruction order for processing the received packet. In independent claim 8, Applicants disclose a packet relay a plurality of processors being connected in series so that the packet sequentially passes through the plurality of processors. Each processor includes the packet data access part claimed in claim 1.

Large discloses a packet filter engine that shifts received packets through a pipeline register for storage in memory (see, e.g., column 5, line 29 though column 6, line 48 and FIG. 1

of Large). A state machine may selectively process packet bytes extracted from the pipeline register based on an offset from the beginning of the packet (see, e.g., column 5, lines 41 – 54 of Large). However, unlike Applicants' claimed apparatus of claim 1, the device of Large fails to provide a means for the state machine to process portions of the packet while the received packet is being shifted through the plurality of registers. Rather, Large's device allows each byte to be extracted only at its offset position and not as it is being shifted through a plurality of registers.

Klim discloses a high speed pipeline apparatus including a plurality of pipelined processors P_n that each receive data, process data, and then send data on to a next pipeline processor or controller C_n (see, e.g., column 4, lines 1 – 65 of Klim). Unlike Applicants' claimed apparatus of claim 8, the apparatus of Klim does not operate pipelined processors P_n independently of an instruction order for processing the received packet. For example, with reference to FIG. 4 of Klim, Eval_tree a which processes data through pipelined processor P_a is controlled by control signal pc-a from controller C_a , and not by an independent clock synchronization signal.

Accordingly, Applicant respectfully submits that independent claims 1 and 8 are not anticipated by either of Large and Klim, and are therefore in condition for allowance. As claims 2 – 7 and 9 – 12 each depend from one of allowable claims 1 and 8, Applicant respectfully submits that claims 2 – 7 and 9 – 12 are also allowable for at least this reason.

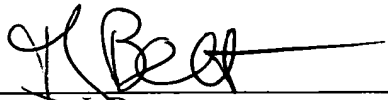
CONCLUSION

An earnest effort has been made to be fully responsive to the Examiner's objections. In view of the above amendments and remarks, it is believed that claims 1 – 12, consisting of independent claims 1 and 8, and the claims dependent therefrom, are in condition for allowance. Passage of this case to allowance is earnestly solicited. However, if for any reason the Examiner

should consider this application not to be in condition for allowance, she is respectfully requested to telephone the undersigned attorney at the number listed below prior to issuing a further Action.

Any fee due with this paper may be charged on Deposit Account 50-1290.

Respectfully submitted,



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TJB:pm